Special Issue

Impacts of Oxidative Stress on Cattle Physiology

Message from the Guest Editors

The field of oxidative stress in ruminant medicine is still in its early developmental stages. Although oxidative stress has been linked to various conditions, much remains to be uncovered about its role in ruminant health and production. Determining whether oxidative stress is a primary cause of pathologic changes or a consequence of disease processes is still a matter of investigation. Dairy cattle undergo significant physiological changes during their one-year life cycle after reaching adulthood. The considerable oxygen requirements during periods of increased metabolic demand lead to an augmented production of reactive oxygen species (ROS). An imbalance between increased ROS production and the availability of antioxidant defenses may expose cows to heightened oxidative stress. The goal of this Special Issue is to provide new advances connecting alterations in the pattern of antioxidants and scavenger compounds, mitochondrial dysfunction, imbalance of energy metabolism, and oxidative stress with onset and/or progression of cattle production systems, also taking into consideration the impact of environmental conditions on cattle welfare in the context of a changing climate.

Guest Editors

Prof. Dr. Camelia Tulcan

Prof. Dr. Adela Pintea

Prof. Dr. Sanda Andrei

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Agriculture
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
agriculture@mdpi.com

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Message from the Editor-in-Chief

Agriculture (ISSN 2077-0472) is an international, cross-disciplinary and scholarly journal on the science and technology of crop and animal production, and management of the natural resource base for agricultural production. We invite submissions from authors according to the aims and scope of the journal described in more detail on this page. *Agriculture* is published in an open access format – articles are published on the journal's website immediately after acceptance, giving the scientific community and the public unlimited and free access to the content.

Editor-in-Chief

Prof. Dr. Les Copeland
Sydney Institute of Agriculture, School of Life and Environmental Sciences, The University of Sydney, Sydney, NSW 2006, Australia

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